

### REMARKS

This is a Response to the Office Action mailed April 5, 2007, in which a three (3) month Shortened Statutory Period for Response expired on July 5, 2007. A one month extension has been requested and paid for, set to expire on August 5, 2007. Nineteen (19) claims, including two (2) independent claims, were paid for in the application. Claims 1 and 19 are currently amended. No new matter has been added to the application. No fee for additional claims is due by way of this Amendment. Upon entry of the amendments herewith, claims 1-19 remain pending.

#### I. Objection to the Drawings

In the Office Action at section 2, Figures 3-10 are objected to as allegedly illustrating prior art. The applicants respectfully traverse the objection for at least the following reasons.

The specification discloses that "FIG. 3 is a schematic perspective view showing an optical recording medium that is a preferred embodiment of the present invention" paragraph [0054]. Accordingly, Figure 3, which illustrates a preferred embodiment of the present invention is not prior art, and therefore should not be designated by the legend --Prior Art-- as suggested by the Office Action.

The specification further discloses that Figures 4-6 illustrate enlarged cross-sectional views of Figure 3, paragraphs [0042] – [0044]. Therefore, Figures 4-6 are not illustrative of the prior art.

The specification further discloses "each of the FIGS. 7 to 10 is a diagram showing the waveform of a pulse pattern for modulating the power of the laser beam L in the case of recording data in the L0 information recording layer 20 or the L1 information recording layer 30 of the optical recording medium 10" paragraph [0112]. Because the optical recording medium 10 is illustrated in Figure 3 and pertains to embodiments of the present invention, Figures 7-10 are illustrating features of various embodiments and are not prior art.

Therefore, for at least the reasons above, the applicants respectfully request withdrawal of the objections to the drawings.

## II. Objections to the Claims

Original claim 1 was objected to at section 3 because the recited limitation, “where D21 is smaller than D2, D22 is larger than D2,” allegedly did not indicate what D2 is representing. The applicants have amended claim 1 and respectfully request withdrawal of the objection.

## III. Rejections under 35 U.S.C. § 102

It is well established at law that for a proper rejection of a claim under 35 U.S.C. § 102, the cited reference must disclose all elements/features/steps of the claim at issue. See, e.g., *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

At sections 4 and 5 of the Office Action (pages 3-10), claims 1-19 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by *Kojima et al.*, (U.S. Pub. No. 2002/0024913 A1, now U.S. Pat. 6,751,184), hereinafter *Kojima*.

### a. Independent Claim 1

#### i. *Kojima* does not disclose a write-once type recording layer

Independent claim 1, as amended, is not anticipated by *Kojima* for at least the reason that *Kojima* does not disclose, teach, or suggest the feature of “a plurality of information recording layers, at least one information recording layer ... being constituted as a write-once type recording layer” as recited in claims 1 (emphasis added).

Instead, the *Kojima* reference clearly discloses that “the first recording layer is made of a phase change material that is transformed in phase reversibly between a crystal phase and an amorphous phase by irradiation with a laser beam.” Col. 9, lines 35-38. That is, *Kojima* discloses “an information recording medium for optically recording, erasing, rewriting, and reproducing information” (Col. 11, lines 61-63). Therefore, *Kojima* does not disclose, teach, or suggest the recited “write-once type recording layer.” Therefore, *Kojima* does not anticipate claim 1, and the rejection should be withdrawn.

ii. **Kojima does not disclose a dependency X of light transmittance**

Independent claim 1, as amended, is allowable for the additional reason that *Kojima* does not disclose, teach, or suggest that thicknesses “D21 and D22 are determined in such a manner that the dependency X of light transmittance of the information recording layer other than the information recording layer farthest from the light incidence plane on the wavelength of a laser beam is smaller than  $1.2 \cdot X_2$  when at least one of the first dielectric film and the second dielectric film has a thickness of D21 to D22, where  $X_2$  is the wavelength dependency corresponding to the second smallest thickness D2” as recited in claim 1 (emphasis added).

The laser beam 35 of the *Kojima* reference is projected onto the information recording medium 10 from the side of the first substrate 11 (Fig. 1; Col. 6, lines 55-58). Thus, at most, *Kojima*’s first information layer 13 may arguably correspond to the “information recording layer other than an information recording layer farthest from a light incidence plane through which a laser beam is projected” as recited in claim 1.

As shown in *Kojima*’s Figure 1, and described at Col. 7, lines 25-31, *Kojima*’s first information layer 13 is formed by laminating a third dielectric layer 24, a fourth interface layer 23, a first reflective layer 22, a second interface layer 21, a second dielectric layer 20, a first interface layer 19, a first recording layer 18, a first interface layer 17, and a first dielectric layer 16 from the side of the intermediate layer 15 to the side of the first substrate 11 side. Thus, at most, *Kojima*’s first recording layer 18 might arguably correspond to the recited “recording layer,” *Kojima*’s first dielectric layer 16 might arguably correspond to the “first dielectric film,” and *Kojima*’s second dielectric layer 20 might arguably correspond to the “second dielectric film.”

Regarding the *Kojima* structure described above, and with respect to a laser beam having a wavelength in a range of 390 nm to 430 nm, Col. 7, lines 38-44 of *Kojima* discloses the equation below,

$$40 < (T_c + T_a)/2$$

where,

“transmittance  $T_c$  (%) of the first information layer 13 is in the case where the first recording layer 18 is in a crystal phase” (Col. 7, lines 38-40); and

“transmittance  $T_a$  (%) of the first information layer 13 is in the case where the first recording layer 18 is in an amorphous phase” (Col. 7, lines 40-42).

However, the *Kojima* reference does not disclose, teach, or suggest that *Kojima's* information layer 13 has a “dependency X of light transmittance ... on the wavelength of a laser beam [that] is smaller than  $1.2 \cdot X_2$  when at least one of the first dielectric film and the second dielectric film has a thickness of  $D_{21}$  to  $D_{22}$ , where  $X_2$  is the wavelength dependency corresponding to the second smallest thickness  $D_2$ ,” as recited in claim 1 (emphasis added). Instead, the *Kojima* reference merely states that by selecting a thickness and a material for each of *Kojima's* first, second and third dielectric layers 16, 20 and 24, the light absorptivity (%) of *Kojima's* first recording layer 18, and the reflectivity and transmittance of *Kojima's* first information layer 13 can be controlled with the use of light interference (Col. 7, lines 49 to 53). Accordingly, for at least the reason that *Kojima* does not disclose, teach, or suggest relationships between dielectric thicknesses and light transmittance as recited, claim 1 is not anticipated by *Kojima*, and the rejection should be withdrawn.

b. Dependent Claims 2-18

Each dependent claim includes the limitations of its respective base claim and all intervening claims. Therefore, allowance of the respective base claim compels allowance of all dependent claims. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, all dependent claims are allowable for at least reasons of their respective base claim, and the rejections should be withdrawn.

Additionally, dependent claims 7-12 are allowable for at least the reason that *Kojima's* information recording layer does not disclose, teach, or suggest that “the recording layer is constituted by a first recording film ... and a second recording film” as recited in claims 7-12.

Instead, as shown in *Kojima's* Figure 1 and described at Col. 7, lines 25-37, *Kojima's* first information layer 13 comprises a first recording layer 18, and *Kojima's* second information layer 14 comprises a second recording layer 27. That is, neither of *Kojima's* two recording layers comprises a first recording film and a second recording film. *Kojima* teaches just the opposite.

At Col. 9, lines 35-38, *Kojima* teaches that a "first recording layer is made of a phase change material that is transformed in phase reversibly between a crystal phase and an amorphous phase by irradiation with a laser beam." At Col. 12, lines 1-4, *Kojima* teaches that a "second recording layer 27 is made of a phase change material that is transformed in phase reversibly between a crystal phase and an amorphous phase by irradiation with a laser beam." Accordingly, *Kojima* teaches information layers that comprise only a single recording film.

Therefore, for at least the reason that *Kojima* does not disclose, teach, or suggest "the recording layer is constituted by a first recording film ... and a second recording film" as recited, claims 7-12 are not anticipated by *Kojima*. Accordingly, applicants respectfully request withdrawal of the rejection.

c. Independent Claim 19

Independent claim 19, as amended, is not anticipated by *Kojima* for at least the reason that *Kojima* does not disclose, teach, or suggest the feature of "at least one write-once type information recording layer" as recited in claim 19 (emphasis added).

Instead, as described above, the *Kojima* reference discloses "phase-change" information recording layers which may be erased and re-recorded. Specifically, *Kojima* discloses that "the first recording layer is made of a phase change material that is transformed in phase reversibly between a crystal phase and an amorphous phase by irradiation with a laser beam." Col. 9, lines 35-38. Further, *Kojima* discloses "an information recording medium for optically recording, erasing, rewriting, and reproducing information." Col. 11, lines 61-63. Therefore, *Kojima* does not anticipate the feature of a "write-once type information recording layer" as recited in claim 19, and the rejection should be withdrawn.

IV. Conclusion

This amendment is made in order to reach agreement on the present claims and have the case advanced to allowance. Overall, the *Kojima* reference does not disclose, teach, or suggest what is recited in the independent claims. Thus, given the above remarks, it is respectfully submitted that the rejections have been traversed. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

If the applicants have overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact Mr. Armentrout at (206) 622-4900.

Favorable consideration and a Notice of Allowance are earnestly solicited. The Director is authorized to charge any additional fees due by way of this Amendment only, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



---

Raymond W. Armentrout  
Registration No. 45,866

RWA:tjs:ja

701 Fifth Avenue, Suite 5400  
Seattle, Washington 98104  
Phone: (206) 622-4900  
Fax: (206) 682-6031

938118\_1.DOC